

PHASE I BOOK EXPIRATION	SOV/3791
Soveshchaniye po obrabotke zharoprochnykh splavov, Moscow, 1957.	
Obrabotka zharoprochnykh splavov; (sbornik dokladov...) (Treatment of Heat-Resistant Alloys; Collection of Papers Read at the Conference), Moscow, Izd-vo AN SSSR, 1960. 231 p., 3,500 copies printed.	
Sponsoring Agencies: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya; Akademiya nauk SSSR. Institut metallurgii im. A.A. Baykova. Nauchnyy sovet po problemam zharoprochnykh splavov.	
Resp. Ed.: V.I. Dikushin, Academician; Ed. of Publishing House: V.A. Kotov; Tech. Ed.: V.V. Brizgul'.	
PURPOSE: This book is intended for metallurgists.	
COVERAGE: The book consists of thirty papers read at the Conference on the Treatment of Heat-Resistant Alloys held in Moscow by the Committee on Machine-Building Technology, Institute of the Science of Machines, Academy of Sciences USSR, in 1957. The papers deal with the principal areas of alloy metallurgy: casting, forging, machining, borides, nitrides, and oxides; high-temperature strength; creep; and welding. The alloys (together with their properties) are discussed especially in connection with their application in the manufacture of turbine blades, heat engines, boilers, reactors, containers for high-temperature media, dies, casting molds, and metal-cutting tools. No personalities are mentioned. Some of the articles are accompanied by references, mainly Soviet.	
Aksentov, P.V. Cast Motor Blades for Gas Turbines	25
Korneyev, N.I., I.O. Shugary, S.B. Pevner, and Ye.I. Razuvaev. Thermomechanical Conditions in the Pressworking of Refractory Alloys of Molybdenum and Chromium Base	33
Rudryavtsev, I.B., and B.I. Aleksandrov. Effect of Work Hardening on the Fatigue Strength of Heat-Resistant Steels at High Temperatures	41
Revintz, V.M.. Deep Drawing of Products From Heat-Resistant Sheet Metals With the Application of Deep Pressing	53
Kleganov, Y.Ya., and T.N. Sizonova. Plastic Workability and Mechanical Properties of Titanium Alloys as Determined by the Conditions of Hot Working	59
Baydov, Yu.P. Special Features of the Stamping of Heat-Resistant And Titanium-Alloy Sheet	67
Petrov, I.S. Upsetting of Heat-Resistant Steel Standard Parts (Airframe Fasteners: Bolts, Rivets, Etc.)	75
Kuleshov, M.Ya. Precision Drop Forging of Steel (Turbocompressor) Blades	79
Byfir, Ye.M. Process of Manufacturing Turbine-Blade Blanks From Heat-Resistant Alloys With Minimum Machining Allowances Along the Blade	87
Nikol'skiy, L.A. Special Features of the Drop Forging of Titanium Alloys	98
Nikolayev, G.A. Welding of Turbine Parts Made of Heat-Resistant Alloys	109
Medovar, B.I. Automatic Electric-Arc and Electroslag Welding of Heat-Resistant Alloys	113

L 04212-67 EWP(d)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l) JD/HM

ACC NR: AR6015874

(A)

SOURCE CODE: UR/0275/65/000/012/V002/V002

AUTHOR: Razuvayev, Yu. P.; Gantsovskaya, A. S.; Latyshev, V. V.

TITLE: A circuit for current-stabilizer control of an electron beam welding assembly

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 12V8

REF SOURCE: Tr. Gor'kovsk. politekhn. in-ta, v. 20, no. 6, 1965, 80-84

TOPIC TAGS: electron beam welding, electron gun, current stabilization, stabilizer

ABSTRACT: The stabilization of the current of an electron beam in welding assemblies may be achieved by an automatic change of the filament voltage of the gun cathode on the primary side of the flipflop of the filament. The executive element of the stabilizer consists of sequential magnetized regulators and a parallelly non-controlled choke. A calculation and a complete circuit of the stabilizer is presented. The control unit is made of semiconductor devices, which makes it possible to obtain signal actuation time by the stabilizer equal to 0.2 sec with an error of 2%. The increment and drop in current during switching in and out is accomplished exponentially in 1-5 sec. The power at the output of the stabilizer amounts to 200 w. [Translation of abstract] 3 illustrations and bibliography of 5 titles. Ye. K.

SUB CODE: 09

Card 1/1 *pla*

UDC: 621.38:62(general (obshch.))

RAZUVAYEVA, A. A.

7690. RAZUVAYEVA, A. A. -- Spravochnik pozavolskoy pervichnoy obra-
botki. Pod red. A. A. Razuvaeva. M., Gilegrom, 1954.495
ss.111; 9L.111.21sm. (M-vo prom. tovarov shirokogo potrebleniya
SSSR. tsentr. nauch- issled.in-tubyankh volokon TSMILV).
5,000 elz. 18R. 10K. V per.-(55-4235) P 677.11.021(08)

SO: Knizhnaya Letopis', Vol. 7, 1955

RAZUVAYEVA, E.V.

Case of chronic Riedel's thyroiditis associated with myxedema.
Probl. endokr. gormonoter. 9 no.4:99-100 J1-Ag'63 (MIRA 17:1)

1. Iz polikliniki No.2 (zav. N.A.Lobanova) Noril'ska.

5 '3700'

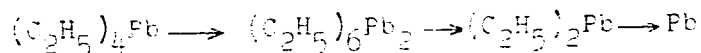
US203
SOV/79-30-3-47/69

AUTHORS: Razuvayeva, G. A., Vyazankin, N. S., Vyshinskiy, N. N.

TITLE: Thermal Decomposition of Tetraethyllead and Hexaethyldiplumbane. II. Decomposition of Tetraethyllead, Hexaethyldiplumbane, and Diethyllead Mixtures

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 3. pp 967-972 (USSR)

ABSTRACT: This is a continuation of the authors' previous study of thermal decomposition of organic lead compounds (ZhOKh. 29, 3662, 1959), where it was shown that the thermal decomposition of tetraethyllead (I) proceeds through the formation of intermediate hexaethyldiplumbane (II), according to:



Card 1/5 This paper describes the thermal decomposition of I and II, and II and diethyllead (III) mixtures. Since

Thermal Decomposition of Tetraethyllead
and Hexaethyldiplumbane. II

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SOV/79-30-3-47/69

it was observed previously that the properties of II, prepared according to F. Hein and A. Klein (Ber., 71, 2381, 1938), depend on the conditions of synthesis, the processes which take place in the synthesis of II were also studied. The mixture of I and II was prepared in the receiver of a special apparatus for distilling I in a hydrogen atmosphere under vacuum. The ampoules with the mixture were kept at $135 \pm 0.4^\circ$ and frozen with liquid nitrogen. Synthesis of II was achieved at $18 \pm 0.2^\circ$ from a mixture of aluminum powder and triethyllead chloride solution in 2.5N KOH. The time effect of synthesis is shown in Fig. 2. Thermal decomposition of II and other results of the experiments are given in Figs. 3, 4, and 5. The data obtained confirm the previous conclusion that the thermal decomposition of I proceeds through the formation of an intermediate II, and thermal decomposition of II proceeds through the formation of III. It is suggested that metallic lead formed in the process of decomposition acts as a

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Thermal Decomposition of Tetraethyllead
and Hexaethyldiplumbane. II

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SOV/79-30-3-47/69

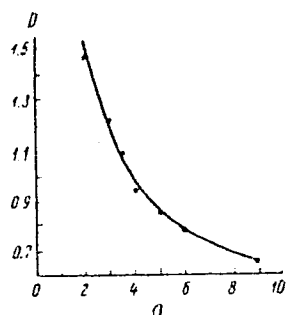


Fig. 2. Change of optical density of hexaethyldiplumbane in process of its synthesis. Thickness of absorption layer $d = 0.020$ mm; wavelength $\lambda = 400$ m μ .

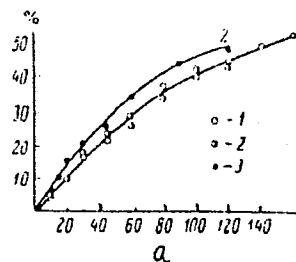


Fig. 3. Decomposition curves of pure tetraethyllead (1); mixture of 2.3% hexamethyldiplumbane and 97.7% tetraethyllead (2); mixture of 19.5% hexaethyldiplumbane and 80.5% tetraethyllead (3).

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Thermal Decomposition of Tetraethyllead
and Hexaethyldiplumbane. II

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SCV/79-30-3-47/69

catalyst. It was shown that synthesis according to
Hein and Klein leads to the formation of a mixture
of diethyllead and hexaethyldiplumbane. There are
5 figures; and 4 references. 1 German, 3 Soviet

SUBMITTED: March 14, 1959

Card 5/5

5.3610

78302
SOV/79-30-3-56/69

AUTHORS: Svetozarskiy, S. V., Rukhovich, G. A., Mikhlin, Ye. N.

TITLE: Synthesis of 2-Substituted of 4-Pentamethylene-5,6-Tetramethylene-2,3,4,5-Tetrahydropyrimidines

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 3, pp 1020-1023 (USSR)

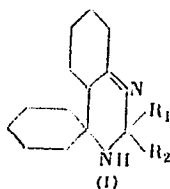
ABSTRACT: It was shown that the previously obtained (by the authors (ZhOKh, 26, 601, 1956)) 2,4-dipentamethylene-5,6-tetramethylene-2,3,4,5-tetrahydropyrimidine (Ia) can also be prepared by condensation of 2-(1-aminocyclohexyl)-cyclohexanone (II) with ammonia.

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Synthesis of 2-Substituted of 4-Pentamethylene-5,6-Tetramethylene-2,3,4,5-Tetrahydropyrimidines

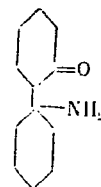
78302

SOV/79-39-3-56/69



(I)

(Ia) $R_1 = R_2 = (CH_2)_5$; (Ib) $R_1 = R_2 = CH_3$;
(Ic) $R_1 = CH_3$, $R_2 = CH_3$; (Id) $R_1 = H$,
 $R_2 = CH_3$.



(II)

The following new compounds were obtained by condensation of II and ammonia with different carbonyl compounds. 2,2-Dimethyl-4-pentamethylene-5,6-tetramethylene-2,3,4,5-tetrahydropyrimidine (Ib) was obtained by condensation of II, ammonia, and acetone

(91%), d_4^{20} 1.002, n_D^{20} 1.5128; 2-methyl-2-ethyl-4-pentamethylene-5,6-tetramethylene-2,3,4,5-tetrahydropyrimidine (Ic) (90.5%), by condensation of II, ammonia,

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Synthesis of 2-Substituted or 4-Penta-
methylene-5,6-Tetramethylene-2,3,4,5-
Tetrahydropyrimidines

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and methyl ethyl ketone, d_4^{20} 1.001, n_D^{20} 1.5138;
2-methyl-4-pentamethylene-5,6,-tetramethylene-2,3,4,5-
tetrahydropyrimidine (Id) (91%), by condensation of

II, ammonia, and acetaldehyde, d_4^{20} 1.02, n_D^{20} 1.5202.

It was shown that (1) ammonia readily adds to
cyclohexanone to form a stable (at low temperatures)
compound with a 1:1 molar ratio; (2) this compound
is not an intermediate product in the preparation of
II and Ia from cyclohexanone and ammonia. There are
7 references, 1 U.K., 4 German, 2 Soviet. The U.K.
reference is: R. B. Bradbury, N. C. Hancox, H. H.
Hatt, J. Chem. Soc., 1947.

SUBMITTED: January 22, 1959

Card 3/3

RAZUVAYEVA, M.I.

Single-thread worm gear cutters for cutting multiple-thread worm
gears. Inzh.-fiz.zhur. no.1:113-116 Ja '60. (MIRA 13:4)
(Gearing worm)

PETYUNEN, P.A.; RAZUMAYEVA, V.P.

Amides and hydrazides of oxalic acid . Part 7: Substituted amides
of N-(4-antipyril)oxamic acid. Izv. vys. ucheb. zav.; khim i khim.
tekh. 7 no.5:791-796 '64 (MIRA 18:1)

1. Kafedra organicheskoy khimii Khar'kovskogo farmatsevticheskogo
instituta.

RAZUMOVSKAYA, Ye.E.

Characteristics and occurrence of saliferous facies in Siberia.
Mat.VSEGEI no.8:261-267 '56. (MIRA 10:2)

(Siberia--Geology, Stratigraphic)

KIRSANOVA, Z.V.; RAZIVAYEVA, Ye.G.

Artificial leacher. Standartizatsiia 27 no.12:46 D '63.
(MIRA 17:4)

KHOROSHAYA, Ye.S.; KIRSANOVA, Z.V.; RAZUVAYEVA, Ye.S.; YELISEYEVA, L.I.

Rapid method for determining the degree of adhesion of polyamide coatings. Kozh.-obuv.prom. 6 no.1:34 Ja '64. (MIRA 17:4)

PENSKIY, A.P.; RAZUVAYEVA, Z.L.; GLAZOV, G.A., redaktor.

[Cast tools not requiring heat treatment] Litoi instrument, ne
trebuiushchii termicheskoi obrabotki. Moskva, Gos.nauchno-tekhn.
izd-vo mashinostroit. lit-ry, 1946. 61 p. (MLRA 8:8)
(Tools) (Steel castings)

RAZUYAZKINA, (Mme, G. M.

~~RAZUYAZKINA (Mme G. M.).~~ Значение Табачного трипса в развитии эпифитотий верхушечной chlorosis Махорки. [The importance of Tobacco thrips in the development of epiphytotics of Mahorka tip chlorosis.]—Докл. Акад. сельскохозяйств. Наук Ленин [Rep. Lenin Acad. agric. Sci. = Proc. Lenin Acad. agric. Sci.], 18, 6, pp. 27-31, 1953. [Received September, 1954.]

Investigations at the Moscow Plant Protection Station, U.S.S.R., have shown that tobacco thrips [*Thrips tabaci*], the vectors of a tip chlorosis of tobacco and mahorka [cheap tobacco], a disease related to the tomato bronze disease [tomato spotted wilt virus: *R.A.M.*, 30, p. 348], are the chief source of virus infection. The virus overwinters in the body of the insect, which becomes infected in the larval stage and can then transmit the virus within three days. The minimum time required for the plants to become infected is five minutes and for the thrips to feed on infected plants 30 minutes. The virus is not egg-transmitted.

RAZUYEV, G. A. ; OLDEKOP, Yu. A.

"Photoreactions of Metallo-Organic Compounds of Mercury in Solutions XII,
Photoreactions of Diphenyl Mercury and bis-n-chlorophenyl Mercury"

Sbornik Statey po obshchey khimii, No. 1, 1953, pp 275-277

abs

W-31098, 26 Nov 54

PAVLOV, A.N.; IVANOV, V.P.; RAZUVAYEVA, V.I.

Foliar feeding of corn with urea at different developmental stages
of the plant. Fiziol.rast. 8 no.5:596-600 '61. (MIRA 14:10)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy
of Sciences, Moscow.
(Corn (Maize)) (Urea)

RAZUVAYEVA, Z.

Rapid determination of insoluble nonmetallic inclusions in ferrovanadium. Z. Razuvaeva. *Novosti Tekhniki* 1938, No. 31-2, 13-14. — Dissolve 5 g. of Fe-V in 250 cc. of the 1:3 mixt. of HNO₃ and NH₄HSO₄, dil. approx. to 375 cc., allow the ppt. of Al₂O₃ to settle, decant to 40 cc., add 50 cc. HCl (1:1), warm, filter, wash with hot 5% HCl soln., then with hot water. Wash the ppt. from the filter with 60 cc. of 10% NaOH, heat for 15 min., filter, wash with water, HCl and again with hot water. Burn in the Pt crucible and weigh.

A. A. Podgorniy

RAZVADOVSKAJA, L. V.

"Sur les derives thioacyliques des amines primaires (synthese des colorants carbocyanin-
ique acycliques). Memoire I". Knounjanc, I. L.; Razvadovskaja, L. V. (p. 557)

SO: Journal of General Chemistry
(Zhurnal Obshchei Khimii) 1939, Volume 9, #6

KHUNYANTS, I. I.. RAZVADOVSKAYA, I. V.

"On the Thiocyclic Derivatives of Primary Amines (Synthesis of Acyclic Carbocyanic Pigments,"
Zhur. Obshch. Khim., 9, No. 6, 1939. Laboratory of Organic Chemistry, Military
Academy of Chemical Defense of the Red Army imeni Voroshilov, Moscow.
Received 15 July 1938.

Report U-1517, 22 Oct 1951

S/170/60/003/01/20/023
B022/B007

AUTHOR: Razuvayeva, M. I.

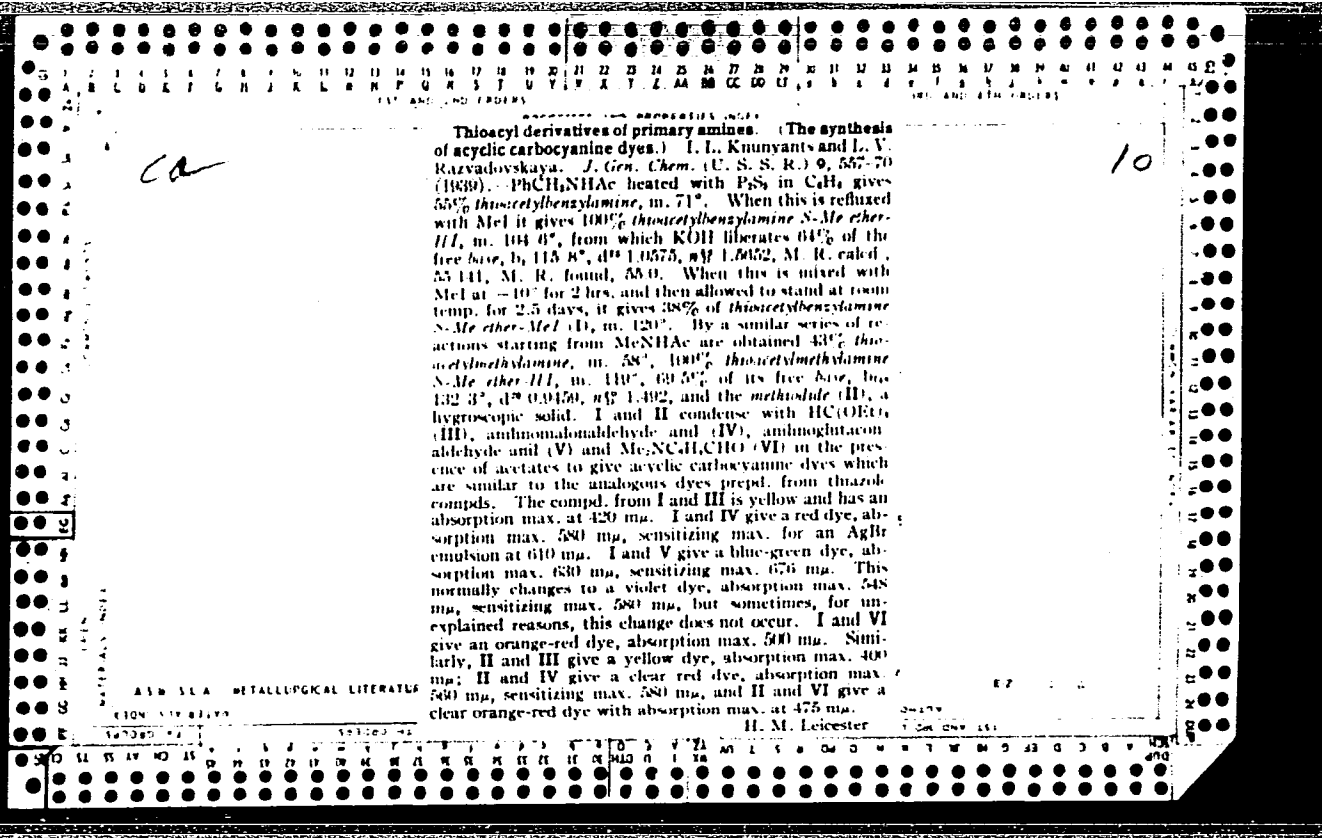
TITLE: Single-thread Worm Cutters⁴ for Cutting Multi-thread Worm Wheels

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 1, pp. 113 - 116

TEXT: The accuracy of cutting toothed wheels has already been dealt with in the papers by N. A. Kalashnikov, B. A. Mayts, K. A. Kornilov, V. A. Shishkov, and A. N. Grubints and others (Abstracter's Note: On page 113: A.N. Grubints, in the bibliography, p. 116: A.N. Grubin). In the present paper only the characteristics of the treatment of the teeth are therefore dealt with, which refer to the method of cutting the teeth of multi-thread worm cutters with small modulus by means of single-thread worm cutters. The diagrams of the contact lines on the surface of the gearing during operation of the four-thread worm gear and of machine gearing, i.e. in the moment of cutting the four-thread worm wheel by means of the suggested single worm cutter are mentioned (Figs. 1,2). The factors characterizing the accuracy of worm wheels cut by means of single- and four-thread worm cutters as well as their resistance to wear are determined. On the basis of the results obtained the advantages of multi-thread worm wheels cut by means of single-thread worm cutters are stressed. Mention is made of N. I. Kolchin. There are 2 figures and 1 Soviet reference.

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1ST AND 2ND OPER. 1										1ST AND 2ND OPER. 2									
PROCESSES AND PROPERTIES INDEX																			
BC This-acyl derivatives of primary amines <i>(synthesis of azo dye carbocyanine dyes).</i> I. L. KUNIAN and L. V. RAHVADOVSKAYA (J. Gen. Chem. Russ., 1930, 8, 577-579). $\text{CH}_3\text{Ph-NH-CHMe}$ and MeI at 0° yield the <i>Acridine</i>, m.p. 104-108° (decolor. by aq. $\text{K}_2\text{Cr}_2\text{O}_7$), of <i>thioacetanilide</i> S-Me ether, $\text{SMe-CHMe-N-CH}_2\text{Ph}$, b.p. 115-118°/4 mm.,										R-3 the methiodide, m.p. 120°, of which is condensed with $\text{CH}(\text{OEt})_2$ or the anililide of $\text{CO}_2\text{H-CH}_2\text{CHO}$ or of glutacanaldehyde in boiling Ac_2O to the dyes, $\text{CH}_3\text{CHCH}_2\text{R}$, $\text{R-CHCH}_2\text{R}$, or $\text{R-CHCH}_2\text{R}$ [$\text{R} = \text{CH}_2\text{Ph-NMeI}(\text{SMe})$; $\text{R} = \text{CH}_2\text{Ph-NMe-C(SMe)CH}_2\text{Ph}$], and with $p\text{-NMe}_2\text{C}_6\text{H}_4\text{CHO}$ to give the dye, $\text{CH}_3\text{Ph-NMeI}(\text{SMe})\text{-CHCHCH}_2\text{C}_6\text{H}_4\text{-NMe}_2$. NHMeAc and P_2S_5 in C_6H_6 (70 min. at the b.p.) followed by MeI yield <i>thioacetanilide</i> S-Me ether, b.p. 132-133°, the methiodide of which is condensed as above, to yield the corresponding dyes [$\text{R} = \text{NMe}_2\text{C(SMe)}$; $\text{R} = \text{NMe}_2\text{C(SMe)CH}_2\text{Ph}$]. The absorption spectra (in EtOH) of the dyes are given. The sensitizing action of the dyes on photographic emulsions is similar to that of the corresponding thiazoline dyes. R. T.									
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND OPER. 1										1ST AND 2ND OPER. 2									



RAZVALYAYEV, A.V., aspirant

Tectonics of southwestern Syria and adjacent parts of
adjoining countries. Izv. vys. ucheb. zav.; geol. i razv.
'7 no.12:14-26 D '64. (MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet.

1. LAZVALYANOV, A.V.; SULEJIKONBAT'YEV, Ye.D.;
1958, 1959.

2. Sediments of Syria. Biol. MOP. Otd. geol. 40
1958, 1959. 15-28 1958.
(MIRA 18:8)

PONIKAROV, V.P.; SULIDI-KONDRAT'YEV, Ye.D.; RAZVALYAYEV, A.V.; KOZLOV, V.V.

Tectonics of the Syrian Desert and the history of its formation.
Sov. geol. 8 no.4:112-122 Ap '65. (MIRA 18:7)

YAMALOV, M. A. A.

Regional development of Syria in the Paleogene. Blot. MAF.

Stratigr. 37 no. 5: 77-92. 1964.

(1964: 181)

RAZVAN, A.T.

The Latin American Trade Unions are strengthening their unity in struggle. Munca sindic 7 no.5:61-63 My '63.

CONSTANTINESCU, C., prof.; RAZVAN, B., conf.; BUSULENGA-NICOLAU, Carmen, dr.
MIRBAN, M., dr.; BOJINCA, D., dr.

Considerations on the connection between chicken pox and zona zoster.
Microbiologia (Bucur) 6 no. 1:63-67 Ja-F '62.

1. Clinica de pediatrie a Spitalului de copii "Grigore Alexandrescu".

*

CONSTANTINESCU, C., prof.; HAZVAN, B., conf.; SANTELEVICI-MARINOV, Sonia,
dr.; OPRISESCU-STRAUSS, Ioana, dr.; SCHIOPU, Filofteia, chim.

Mucoviscidosis--respiratory form. Pediatria (Bucur) 14 no.1:
7-11 Ja-F'65.

1. Lucrare efectuata in Spitalul clinic de copii al Raionului
"30 Decembrie", si Clinica a II-a de pediatrie (sef de clinica:
prof. C. Constantinescu).

GOLDSTEIN, I.; KAHAN, A.; COTARECEA, S.; RAZVAN, B.; JUSTER, A.; SOLOMON, E.;
BUCUR, D.; WEISER, G.; ROSIANU, C.; GROZA, M.; ALDEA, B.

Prevention of rheumatic diseases in school-age children. Probl.
reumat., Bucur. 4:221-232 1956.

(RHEUMATISM, in inf. & child
prev. in school chold. in Rumania)
(RHEUMATIC HEART DISEASE, in inf. & child
prev. in school child. in Rumania)

11-00000000

ACC NR: AP6029592

SOURCE CODE: RU/0022/66/011/004/0184/0189

AUTHOR: Razvan, E. (Engineer)

ORG: Laboratory of Hydraulics and Construction, Hydrotechnical Study and Research Institute (Laboratorul de hidraulica a constructiilor din Institutul de studii si cercetari hidrotehnice)

TITLE: Modern solutions for dam aprons. I.

SOURCE: Hidrotehnica, gospodaria apelor, meteorologia, v. 11, no. 4, 1966, 184-189

TOPIC TAGS: civil engineering, hydrology, mechanical stress

ABSTRACT: From an analysis of about 120 reported design proposals for dam aprons, the author derives some general conclusions as to the present tendencies in the field. Compact schemes, intense stresses on the construction materials, and the guidance of local scour in the tailwater are especially considered. Some examples are given of projects erected in Rumania on the basis of designs by the Institute for Hydrotechnical Research. Orig. art. has: 15 figures, 7 formulas and 1 table. [Based on author's Eng. abst.] [JPRS: 36,844]

SUB CODE: 13, 08, 20 / SUBM DATE: --Oct65 / ORIG REF: 002 / SOV REF: 001
OTH REF: 005

UDC: 627.838

Card 1/1

0917 2687

KAZVAN, E., ing.; MAGARIE, I., ing.

Results obtained by some studies on the dissipation of
energy. Studii hidraul 5:301-324 '63.

RAEVAN, E., ing.

Results obtained by the Institute for Hydrotechnic Studies
and Research regarding energy dissipators. Hidrotehnica
8 no. 6: 202-207 Je '63.

RAZVAN, E.; SPATARU, A.

Study of a water supply intake for industrial water supply.
Hidrotehnica 8 no.11:393-398 N '63.

R/008/61/000/005/005/005
D289/D305

AUTHOR: Răzvan, E.

TITLE: Method of studying the macroturbulent motion of heavy fluids, and some results obtained

PERIODICAL: Studii și cercetări de mecanică aplicată, no. 5, 1961, 1081-1100

TEXT: In the present article, the author extends his studies to determining the pulsation of pressure and especially to the macro-pulsation of velocity. He uses an experimental reinforced concrete channel, with a total length of 50.80 m and a rectangular cross-section of 0.60 x 3.00 m, the specific discharge of the channel being around 160 lit/sec. The rate of flow was measured by a Zhestovskiy "Zh III" current meter, characterized by a synchronization length of 5 cm and a linear calibration based on the relation

$$V = kn,$$

in which k is a constant magnitude of the propeller. The current Card 1/8

Method of studying ...

R/005/61/000/005/005/005
D289/D305

meter's propeller could be revolved in both directions. The impulses were transmitted to an "OTT" electric recorder, provided with a time base of 0.2 sec. The speed variations were recorded according to the hydraulic conditions indicated in Table 1 in seven sections of the channel, as shown in Fig. 1. The average velocity was first measured by a "Dr. Lange" current meter. The macropulsations were generated by two sources: The decomposition of the large vortices and the oscillation of the fluid layer, both of them being produced by the hydraulic jump. Based on these data, the author calculated for every point the average velocity in the given point:

$$\bar{u} = \frac{1}{T} \int_0^T u(t) dt \quad (1)$$

the square values of the average pulsation of the velocity:

Data 2.

Method of studying ...

R/008/61/000/005/005/005
D289/D305

$$\bar{u}'^2 = \frac{1}{T} \int_0^T (u - \bar{u})^2 dt \quad (2)$$

and the intensity of the macroturbulence:

$$K = \sqrt{\frac{\bar{u}'^2}{\bar{u}^2}} \quad (3)$$

The position of every section was defined by the parameter ξ_x : ✓

$$\xi_x = \frac{x}{h_{cr}} \quad (4)$$

In case of $\xi_x > 35$, the macroturbulent intensity was characterized in the whole section by only one value of K. Thus, the variation of

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D289/D305

the K parameter along the flow could be represented in Fig. 14, on the basis of:

$$K = f_1(\xi_x) \quad (6) \quad \checkmark$$

Laboratory experiments accomplished in a 0.624 x 0.40 x 3.50 m channel, led to the following K values:

$$K = f_2(\xi_x)$$

which is also represented in Fig. 14. Thus, in the transition zone, the values of K were much higher in the prototype than in the laboratory model. Although these data refer only to the u_x longitudinal component of the velocity, there exists a way to evaluate u_y and u_z which permits calculation of the correcting values α and α_0 of the total kinetic energy. These values are expressed by:

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$$\alpha = 1 + 5 k^2 \quad (8)$$

and

$$\alpha_0 = 1 + k^2 \quad (9)$$

The variations of the

$$\alpha = f(\xi_x) \quad \text{and} \quad \alpha_0 = f(\xi_x) \quad (10)$$

are represented graphically. Although the current meter was not an ideal instrument for measuring the pulsation of the velocities, it supplied values of a precision, similar to those given by other laboratory methods. The damping of the pulsations of the macroturbulence depended on the dimensions of the live section, and was more effective in the laboratory model than in the prototype. These results justified an extension of studies requiring, however, more perfect measuring instruments. There are 15 figures, 1 table and 10 references: 9 Soviet-bloc and 1 non-Soviet-bloc. The reference

Card 5/8

Method of studying ...

R/008/61/000/005/005/005
D289/D305

to the English-language publication reads as follows: A. A. Town-
send, The structure of the turbulent shear flow. Cambridge, 1956.

ASSOCIATION: Institutul de studii și cercetări hidrotehnice "ISCH"
(Hydrotechnical Studies and Research Institute), Bu-
charest ✓

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Method of studying ...

R/008/61/000/005/005/005
D289/D305

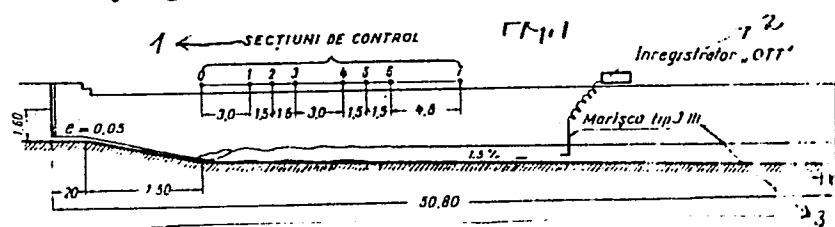


Fig. 1

Used experimental installation. Legend: (1) Control cross-section;
(2) "OTT" recorder; (3) "Zh III"-type current meter.

q m^3/s	h_{cr} m	h_c m	h_a m	σ_{σ}	ζ	L_s m	L'_s m
0,165	0,11	0,030	0,52	88	1,32	2,20	2,78
0,134	0,12	0,025	0,50	112	1,32	2,10	2,60

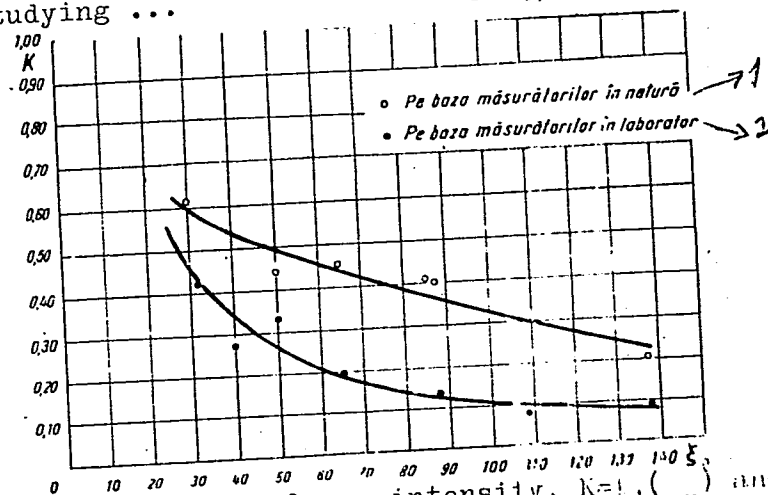
Table 1

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D289/D305

Method of studying ...

Fig. 14



Variation of the macroturbulence intensity, $K=f_1(x)$ and $K=f_2(x)$.

Legend: (1) On the basis of measurements accomplished in nature;
(2) on the basis of laboratory measurements

Card 8/8

RAZVAN, E., ing.

Computation and designing divergent dissipating basins.
Hidrotehnica 8 no.7:242-244 J1'63

RAZVAN, E., ing.

Contributions of the Institute for Hydrotechnical Studies and
Research to the study of free level intakes. Meteorologia
hidrol gosp 6 no.2:83-92 '61.

RAZVAN, E., ing.

Rumanian Standard STAS-3621-52 concerning the drinking and industrial water supply ; intakes from the rivers of small depths. Meteorologia hidrol gosp 6 no.1:46-49 '61.

7

RAZVAN, N., ing.

Activity of the laboratories on hydrotechnical studies in
Czechoslovakia. Meteorologia hidrol gosp 6 no.1271-72 '61.

RAZVAN, E., ing.; VASILIU, A., ing.

New gates on the Danube River. St si Teh Buc 16 no.6:18-20 Je '64.

1. Institute for Hydrotechnic Studies and Research (for Razvan).
2. I.S.P.H. (for Vasiliu).

RAZVAN, E.

Methods and some results obtained in studying the macroturbulent flow of heavy fluids. Studii cerc mec apl 12 no.5:1081-1100 '61.

1. Institutul de studii si cercetari hidrotehnice (ISCH), Buduresti.

R/008/60/000/006/004/008
A231/A126

AUTHOR: Răzvan, E.

TITLE: The characteristic parameters and the equation of the macroturbulent motion

PERIODICAL: Studii și cercetări de mecanică aplicată, no. 6, 1960, 1,543 - 1,553

TEXT: The author examines the importance of the kinetic energy of pulsation in a macroturbulent motion produced, for instance, downstream of a dam spillway. Considered is the determination of a spillway which supplies a Q discharge into a smooth bed, having a slope of $1 \text{ } i_{gr}(Q)$ and a width B , strictly equal with that of the spillway; h_2 is a downstream depth normal for the Q discharge conjugated to the h_1 contracted depth. Under these conditions, the plane hydraulic jump appears at the abutment of the dam. Qualitative transformations take place within the limits of the hydraulic jumps: the scheme of the velocity distribution on the vertical line is powerfully distorted and there appears a transitional zone as well as a vortex zone with horizontal axis. These vortexes of dimensions comparable with the height of the current and relatively high frequency (5 - 10 cps) are driven downstream, being gradually decomposed into more and more

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R/008/60/000/006/004/008
A231/A125

The characteristic parameters and the ...

small vortexes. This transition phenomenon is accomplished in the so-called transitional zone. Its typical phenomenon is the decomposition of the vortexes and its governing parameters can be found by analyzing this phenomenon schematized to maximum. The problem thus can be assimilated to that of the diffusion of a curl line in an infinite fluid mass. This problem has been treated in the classical works of fluid mechanics. According to a theorem of Helmholtz, the curl lines are preserved in an incompressible ideal fluid being in motion under the action of a constant mass force. Mathematically, this theorem is expressed by: $\frac{d\Omega}{dt} = (\Omega \cdot \nabla) \cdot \nabla$, (1) [Abstracter's note: The symbols are not explained]. In case of a real fluid, this theorem is generalized, being expressed by: $\frac{d\Omega}{dt} = (\Omega \cdot \nabla) \nabla + \nu \nabla^2 \Omega$, (2) and in case of a plane problem by: $\frac{d\Omega}{dt} = \nu \nabla^2 \Omega$, (3). Because of the lack of an external source maintaining the vortexes, particles adjacent to the curl line are forced into a rotating motion, whereas the diffusion of the vortexes into the liquid mass takes place at the same time. The large vortexes are thus decomposed into smaller ones. The lower limit of the dimensions is conditioned by the viscosity value. In case of a vortex tube of finite dimensions, the diffusion phenomenon of the vortexes is very difficult to be expressed by mathematical means. The classical hydrodynamical equations have been

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R/008/60/000/006/004/008
A231/A126

The characteristic parameters and the...

established for elementary fluid volumes and for infinitely small time intervals. The transposition of currents of real dimensions requires the integration of the respective differential equations. Besides the calculation difficulties, this operation presents some other difficulties, e.g., the velocity field is nonstationary, the motion takes place in a stochastic process, and its elements are connected to analytical and correlative dependences. In case of velocities in two points, being in a moving fluid, the correlation coefficient $R(r)$ tends towards zero if the distance between the two points increases, i.e., the relation between the local velocities in two points loses its functional character and becomes statistical, in case the two points are at finite distance. Against these results, even the selection of the parameters which characterize the macroturbulent flow becomes difficult. To overcome this difficulty, the author has used for the analysis of macroturbulent motion the elements of the statistical analysis of the spectral theory of turbulence. This theory is based on the fact that the medium motion, as well as the pulsating motion, are subjected to the law according to which the pulsations cannot be qualified as purely accidental phenomena. The decomposition into a Fourier series is possible by admitting that the velocity pulsation contains a continuous frequency spectrum. This means that through the considered volume, fluid masses are passing over into a rotation, having dimen-

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R/008/50/000/006/004/008
A231/A126

The characteristic parameters and the...

sions continuously varying between a maximum limit determined by the geometrical dimensions of the transversal section and a minimum limit determined by the fluid viscosity. Measurements accomplished in an isotropic turbulent stream have confirmed this hypothesis. Passing over to the macro-turbulent motion, there has to be said that the disposable kinetic pulsation energy, existing in every section, is produced by the increase of the high amplitude pulsation frequencies. In a section of the macro-turbulent flow, the spectral function thus has to have the same structure as in the above analyzed case, with the difference that the curve's mode is displaced in the zone of high frequencies. The determination of the resistance-coefficient variation along the flow, or the explanation of the $C(x)$ function will be accomplished in a future study. There are 4 figures and 4 references: 2 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: A.A. Townsend: The structure of the turbulent flow. Cambridge, 1956. ✓

ASSOCIATION: Institutul de studii și cercetări hidrotehnice (Institute of Hydro-technical Studies and Investigations)

SUBMITTED: February 18, 1960 (initially)

Card 4/4

Razvan, E.

The hydraulic calculus of bridges; a correct calculating method for the overfall with a broad sill. p. 158.

REVISTA TRANSPORTURILOR. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Transporturilor Rutiere, Navale si Aerlene) Bucuresti. Vol. 6, No. 4, Apr., 1959

Monthly list of East European Accessions (EEAI) ^{Vol. 8} No. 8, LC, /, Aug., 1959

Uncl.

RAZVAN, E.

The laboratory for hydrotechnic research in Bucharest.

p. 71
Vol. 3, no. 2, Feb. 1956
REVISTA TRANSPORTURILOR
Bucuresti

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 12
December 1956

RAZVAN, S.

Manipulation of waste weirs. p. 419.

HIDROTEHNICA. (Asociatia Stiintifica Inginerilor si Tehnicienilor din Romania)
Bucuresti, Rumania. Vol. 3, No. 11/ 12, Nov./Dec. 1958.

Monthly List of East European Accessions (EEAI) LC Vol. 8, No. 6, June 1959.
Encl.

RAZVAN, E.

Characteristic parameters and equation of macroturbulent flow.
Studii cerc mec apl 11 no.6:1543-1553 '60.

1. Institutul de studii si cercetari hidrotehnice (Bucuresti)

1957, 2.

Problems of downstream consolidation in the light of data of certain
executed construction works. n. 217.

REDACTION. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din
Romania)
Bucharest, Romania
Vol. 4, no. 7. July 1959.

Monthly list of Eastern European Accession Index (EAI) LC vol. 5, no. 11
November 1959
1961.

1/2 1, 2.

Determining the power limit in hydroelectric fluvial plants. p. 285.

1959. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din
Romania si Ministerul Energiei Electrice si Industrii Electrotehnice)
Bucuresti, Romania
Vol. 7, no. 4, June 1959.

Monthly list of Eastern European Accession Index (EAI) IC vol. 8, No. 11
November 1959
Uncl.

PETYUNIN, P.A.; RAZUVAYEVA, V.P.

Amides and hydrazides of oxalic acid. Part 8: Synthesis in the hydrozide series of N-substituted oxaminic acids. Izv.vys.ucheb. zav.; khim.i khim.tekh. 7 no.6:941-944 '64.

(MIRA 18:5)

1. Khar'kovskiy farmatsevticheskiy institut, kafedra organicheskoy khimii.

CONSTANTINESCU, G., prof.; KAZVAN, V.; conf.; VEIDENFELD, Roza, dr.;
POPESCU-M. GLOSARI, Sp. dr.

Late Niemann-Pick disease. *Pediatrics* (Bucur.) 13 no.6:539-544
E-D 66

1. Lucrare efectuată în Clinica de pediatrie a Spitalului de
copii al raionului "30 Decembrie", București (seful Clinicii:
prof. Corneliu Constantinescu).

MOROZOV. V.P.; RAZVARIN, A.M.

Effect of noise on vocal and motor functions in singers. Vest.

IGU 15 no.9:137-142 '60.

(MIRA 13:4)

(NOISE—PHYSIOLOGICAL EFFECT) (SINGING)

24

A comparative study of the reactions of anabasine, nicotine and conline. V. A. Ryzvadovskii. *Farmatsiya* 1939, No. 12, 12-15; *Khim. Referat. Zhur.* 1940, No. 7, 38.—The Meltzer reagent (CS₂ + EtOH + dil. CoSO₄ soln.) forms a white turbidity (precipitating cream) with anabasine and a black brown turbidity with nicotine and conline. All 3 alkaloids form characteristic crystals in acid anhydride soln. of picric acid. A mixt. of ether soln. of anabasine or of nicotine forms with an ether soln. of 1 first a turbidity and then crystals. Conine does not

13

ANAL. LIT. DETAIL LITERATURE CLASSIFICATION

LYCHKIN, V.M.; GRAFSKIY, N.I.; POKOYEVA, P.S.; RAZVIN, V.M.

Proposals of the efficiency promoters of the Saratov Oils and
Fats Combine. Masl.-zhir. prom. 29 no.8:30 Ag '63.
(MIRA 16:10)

RAZVINOVA, V. V.

RAZVINOVA, V. V.: "The formation of volitional qualities in young school-age children." Moscow City Pedagogical Inst imeni V.P. Potemkin. Moscow, 1956.
(Dissertation for Degree of Candidate in Pedagogical Sciences).

SO: Knizhnaya letopis', No 23, 1956

RAZVODOV, B.I.; ZAMAYEV, B.N.; MEL'NIK, T.A.

Experience in polytechnical education. Fiz. v shkole 17 no.2:73-
76 Mr-Apr '57. (MLRA 10:3)

1. 1-ya srednyaya shkola imeni M.I.Kalinina, St.Belorechenskaya
Krasnodarskogo kraya.

(Technical education)

RAZVODOVSKAYA, I.N.; KHOROSHILOVA, L.D.

Scientific and technical conference on protective lubricants
and self-emulsifying oils. Khim. i tekhn. topl. i masel 8
no.4:71-72 Ap '63. (MIRA 16:6)

(Lubrication and lubricants--Congresses)
(Emulsifying agents--Congresses)
(Corrosion and anticorrosives)

MEL'NIKOV, N.N.; GRAPOV, A.F. RAZVODOVSKAYA, L.V.

N-alkylamidomethylthiophosphonyl chlorides. Zhur. VKHO 10
r. 4:163-464 '65. (MIRA 18:11)

Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh
sredstv zashchity rasteniy.

L 31212-66 EWT(1)/EWT(m)/EWP(j) RO/RM

ACC NR: AP6022794

SOURCE CODE: UR/0079/66/036/002/0269/0271

AUTHOR: Mel'nikov, N. N.; Grapov, A. F.; Razvodovskaya, L. V.

ORG: none

TITLE: Organic insectofungicides. XC. Nonsymmetrical diamides of methylthiophosphonic acid

SOURCE: Zhurnal obshchey khimii, v. 36, no. 2, 1966, 269-271

TOPIC TAGS: insecticide, fungicide, organic amide, substituent, organic phosphorus compound, organic synthetic process, chlorinated organic compound

ABSTRACT: In the light of the fungicidal and herbicidal activity of certain diamides of phosphoric and phosphonic acids, the authors investigated the influence of substitution of a sulfur atom in place of the oxygen atom upon the biological activity of such compounds. Nonsymmetrical diamides of methylthiophosphonic acid were synthesized by the reaction of the chlorides of amidomethylthiophosphonic acids with substituted anilines. In the reaction of the chloride of N,N-dimethylamidomethylthiophosphonic acid with aniline or p-chloroaniline in benzene or chloroform, only N,N-dimethyl-N'-aryldiamidomethylphosphonates were formed, independent of the solvent. Tests of the preparations indicated that they possess fungicidal activity. N-Isopropyl-N'-p-chlorophenyldiamidomethylthiophosphonate in a 0.01% concentration proved effective against mycelium and spores of various fungi. The authors thank L. G. Fedoseyenko for investigating the fungus activity of the preparations. Orig. art. has: 1 table. [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 01Jan65 / ORIG REF: 004

Card 1/1 P.G.

UDC: 661.718: 632.95

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L 2158-66 EWT(1)/EWT(m)/EWP(j)/EWA(b)-2 RM/RO/GS
ACC NR. AP 5026042

UR/0000/65/000/000/0258/0259

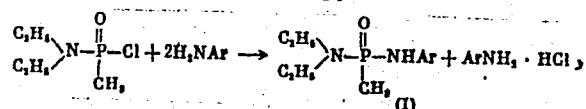
AUTHOR: Mel'nikov, N. N.; Grapov, A. F.; Razvodovskaya, L. V.

TITLE: Herbicides and plant-growth regulators. 41. Synthesis of unsymmetrical diamides of methylphosphonic acid.

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Biologicheskii aktivnyye soyedineniya (Biologically active compounds). Moscow, Izd-vo Nauka, 1965, 258-259

TOPIC TAGS: pesticide, fungicide, herbicide, growth regulator, phosphonic acid derivative

ABSTRACT: In the course of continuing search for new pesticides, a series of N,N-diethyl-N'-arylmethylphosphonodiamides were prepared from N,N-diethylamidomethylphosphonyl chloride and substituted anilines:



where Ar = C₆H₅, o-ClC₆H₄, m-ClC₆H₄, p-ClC₆H₄, o-CH₃C₆H₄, p-CH₃C₆H₄, p-NO₂C₆H₄, p-CH₃OC₆H₄, p-C₂H₅OC₆H₄. Most of the compounds obtained inhibit the growth of the fungi Borytis cinerea, Fusarium oxysporum, Rhizoctonia violacea, and Fusicladium dendriticum. Only N-p-nitrophenyl-N',N'-diethylmethylphosphonodiamide approaches the

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2158-66

ACC NR: AP5026042

standard (1,4-dichloronaphthoquinone) in effectiveness. Orig. art. has: 1 table. [VS]

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy (All-Union Scientific Research Institute of Chemicals for Plant Protection)

SUBMITTED: 10Feb64

ENCL: 00

SUB CODE: GC, LS

NO REF SOV: 003

OTHER: 004

ATD PRESS: 4119

Card 2/2

MEL'NIKOV, N.N.; GHAPOV, A.F.; RAZVODOVSKAYA, L.V.; PORTNOVA, S.L.

Herbicides and plant regulators. Part 43: Reaction of N,N-dimethylamidomethylphosphonyl chloride with anilines. Zhur. ob. khim. 35 no.10:1771-1774 O '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy.

L 26061-66 EWT(1) RO

ACC NR: AP5025126

SOURCE CODE: UR/0079/65/035/010/1771/1774

AUTHOR: Mel'nikov, N. N.; Grapov, A. F.; Razvodovskaya, L. V.; Portnova, S. L.

ORG: All-Union Scientific Research Institute for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut zashchiti rasteniy)

TITLE: Herbicides and plant growth regulators, XLIII. The reaction of acid chloride of N,N-dimethylamidomethylphosphonic acid with anilines

SOURCE: Zhurnal obshchey khimii, v. 35, no. 10, 1965, 1771-1774

TOPIC TAGS: pesticide, plant growth, phosphonic acid, ^{organic}phosphorus compound, aniline, organic amide, IR spectrum, electron paramagnetic resonance

ABSTRACT: Continuing the work on the search for new effective chemical agents for plant protection, the reaction of acid chloride of dimethylamidomethylphosphonic acid with anilines was studied. The reaction occurs in two directions. Depending on the nature of the solvent and the substitute N,N-dimethyl-N'-aryldiamidomethylphosphonates or N,N'-diaryldiamidomethylphosphonates form in the benzol ring of aniline. In the aniline benzol, m and n-chloranilines and m-toluidine form symmetrical diamides, and n-toluidine forms an asymmetrical diamide of methylphosphonic acid. In chloroform, n-chloraniline and m and n-toluidines

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UDC: 632.954

L 26061-66

ACC NR: AP5025126

2.

form asymmetrical diamides, aniline forms a symmetrical diamide, m-chloraniline forms a mixture of an asymmetrical and symmetrical diamide of methylphosphonic acid. Aniline in an acetone and petroleum ester forms an asymmetrical diamide. The structure of compounds obtained is confirmed by intensity measurements of the symmetrical valence oscillation band of the benzol ring in infrared spectra (1600 cm^{-1}) and paramagnetic resonance spectra. We thank A. F. Vasil'yev and V. V. Galushina for the infrared spectra research. Orig. art. has: 1 fig. and 1 table.

SUB CODE 06,07,20/67BM DATE: 30Jun64/ ORIG REF: 001/ OTH REF: 002

Card 2/2

pla

ACC RPAPO031057

(N)

SOURCE CODE: UR/0394/66/004/009/0051/0054

AUTHOR: Bakumenko, L. A.; Lebedeva, N. V.; Razvodovskaya, L. V.;
Grapov, A. F.; Mel'nikov, N. N.

ORG: All-Union Scientific Research Institute of Chemicals for Plant
Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh
sredstv zashchity rasteniy)

TITLE: Synthesis and herbicidal activity of amido esters and diamides
of methyl- and chloromethylphosphonic acids

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 9. 1966, 51-54

TOPIC TAGS: ~~herbicide, amido phosphonate, methyl phosphonic acid,~~
~~diamide, WEEDKILLER, ESTER, AMIDE, TOXICOLOGY~~

ABSTRACT: Herbicidal activity of the previously obtained amido esters
and diamides of methyl- and chloromethylphosphonic acids
was studied under laboratory conditions. The results are
given in Tables 1 and 2. Experiments with white mice
showed that amido esters of methylphosphonic acid are
highly toxic for mammals, as shown in Table 3.

Card 1/5

UDC:632.954+542.91

ACC NR:AP6031057

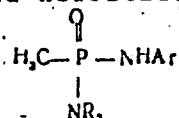
Table 1 cont.

C	D	Concentration (mg/l) causing 50% of growth retardation					
		Rhoads	Millet	Radish	Vetch		
1.5298	1.2610	> 150	> 150	> 150	> 150	45	
—	—	> 150	> 150	15	> 150	75	
—	—	> 150	> 150	15	> 150	75	
1.5331	1.2856	120	60	45	150	13.5	
1.5309	1.2426	> 150	60	10.5	60	10.5	
1.5190	1.1991	> 150	105	60	13.5	1.5	
1.5165	1.1763	75	37.5	7.5	60	6	
1.5102	1.1973	120	90	10.5	120	12	
1.5112	1.1835	—	—	—	—	—	
1.5131	1.1726	—	—	—	—	—	
—	—	105	120	60	135	60	
—	—	150	150	75	> 150	120	
—	—	150	—	—	> 150	50	
1.5191	1.1839	150	—	15	> 150	60	
1.5252	1.2386	135	45	10.5	> 150	60	
1.5162	1.1775	150	90	13.5	150	13.5	
1.5288	1.2559	> 150	52	13.5	1	75	
—	—	> 150	38	68	> 150	135	
—	—	120	75	38	> 150	9	
—	—	105	90	75	> 150	9	
—	—	120	120	105	> 150	9	
—	—	> 150	—	> 150	> 150	> 150	
1.5150	1.2003	> 150	52	38	> 150	60	
—	—	> 150	52.5	45	> 150	14	
—	—	> 150	75	75	150	68	
—	—	> 150	82	37.5	45	11	
—	—	> 150	38	7.5	45	9	
—	—	> 105	37.5	30	> 150	45	

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ACC NR: AP6031057

Table 2. Properties and herbicidal activity of diamides of methylphosphonic acid



Compound	Ar	R	mp in °C	Concentration (mg/l) causing 50% of growth retardation									
				Wheat		Oats		Millet		Radish		Vetch	
				Sprouts	Roots	Sprouts	Roots	Sprouts	Roots	Sprouts	Roots	Sprouts	Roots
1	C ₆ H ₅	CH ₃	74—75	—	—	—	—	—	—	—	—	—	—
2	C ₆ H ₄ Cl- <i>m</i>	CH ₃	124—125	>150	>150	>150	135	120	37,5	>150	>150	>150	105
3	C ₆ H ₄ Cl- <i>n</i>	CH ₃	158—160	>150	150	>150	60	97,5	97,5	>150	>150	135	120
4	C ₆ H ₄ CH ₃ - <i>m</i>	CH ₃	86—88	—	—	—	—	—	—	—	—	—	—
5	C ₆ H ₄ CH ₃ - <i>n</i>	CH ₃	139—141	—	—	—	—	—	—	—	—	—	—
6	C ₆ H ₅	C ₂ H ₅	78—79	>150	150	75	75	>150	>150	>150	>150	>150	30
7	C ₆ H ₄ Cl- <i>o</i>	C ₂ H ₅	84—85	150	37,5	>150	75	>150	>150	135	135	120	>150
8	C ₆ H ₄ Cl- <i>m</i>	C ₂ H ₅	105,5—106,5	>150	75	>150	37,5	>150	>150	>150	>150	>150	>150
9	C ₆ H ₄ Cl- <i>n</i>	C ₂ H ₅	114—114,5	>150	37,5	>150	30	>150	>150	135	120	>150	37,5
10	C ₆ H ₄ CH ₃ - <i>o</i>	C ₂ H ₅	58—59,5	—	—	—	—	—	—	—	—	—	—
11	C ₆ H ₄ CH ₃ - <i>m</i>	C ₂ H ₅	59—60	—	—	—	—	—	—	—	—	—	—
12	C ₆ H ₄ CH ₃ - <i>n</i>	C ₂ H ₅	137—138,5	>150	>150	>150	120	>150	>150	>150	>150	>150	150
13	C ₆ H ₄ NO ₂ - <i>n</i>	C ₂ H ₅	118—119	>150	>150	>150	>150	>150	>150	>150	75	>150	>150
14	C ₆ H ₄ O ₂ C ₂ H ₅ - <i>n</i>	C ₂ H ₅	93,5—95,5	>150	135	120	90	150	>150	>150	75	150	150
15	C ₆ H ₄ OCH ₃ - <i>n</i>	C ₂ H ₅	95,5—97	—	—	—	—	—	—	—	—	—	—

Contd. 1/5

ACC NR:AP6031057

Table 3. Toxicity (mg/kg) of some compounds with respect to white mice

Compound no. in Table 1	LD ₁₀₀	LD ₅₀	Minimum toxic dose
IV XVI ;	50 100	25 75	12.5 25.0

The authors thank Professor V. I. Vashkov for investigating the toxicity of the preparations for mammals and M. I. Gagarinaya for studying the effect of the preparations on Hill's reaction. Orig. art. has: 3 tables

[WA-50; CBE No. 14]
[PS]

SUB CODE: 07/ SUBM DATE: 30May66/ ORIG REF: 007

Card 5/5

ACCESSION NR: AP40091/8

S/0190/64/006/001/0058/0063

AUTHORS: Berlin, A. A.; Zhrebtsova, L. V.; Razvodovskiy, Ye. F.

TITLE: Polymers with conjugated system. 37. Synthesis of polymers with charged heteroatoms in the macromolecular chain (onium polymerization)

SOURCE: Vy*so'komolekulyarny*ye soyedineniya, v. 6, no. 1, 1964, 58-63

TOPIC TAGS: polymer, polymerization, conjugated system, 4-chloropyridine, 4-bromopyridine, copolymerization, 1,4-dibromobutane, onium polymerization, charged heteroatom, polymerization kinetics, stepwise mechanism, ionic state

ABSTRACT: In the so-called "onium" type of polymerization the growth of the chain is said to proceed via the incorporation of heteroatoms as ions of abnormal valency. In the present paper, 4-chloropyridine and 4-bromopyridine were subjected to thermal polymerization in sealed evacuated glass ampoules in a temperature range of 0-210C, for a 3-5 hour period. The polymerization of 4-chloropyridine was also conducted in pyridine solution at 100C for 6 hours. Copolymerization of gamma,gamma'-dipyridyl with 1,4-dibromobutane was also achieved. The polymers obtained were subjected to chemical analysis, and their molecular weight, electrical conductivity, infrared spectra, and electron paramagnetic resonance data studied. In the opinion of the

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ACCESSION NR: AP4009148

authors the polymerization process presumably proceeded along steps outlined in Fig. 1 of the Enclosure, in a stepwise pattern, through the stage of an ionized complex involving a transfer of charge as well as of the intermediate complex. It was found that polymerization in an aluminum cell proceeded without any induction period and at an accelerated pace as compared with a silicone-coated cell. The addition of 0.5-1.0% KI catalyzed the polymerization of 4-chloropyridine. A maximum molecular weight of 4360 for the 4-chloropyridine polymer was obtained at 165C, while the 4-bromopyridine polymer had a molecular weight of 1920 at 150C. All polymers were soluble in water and hydrochloric acid, while only the ones obtained at 0-50C were soluble in methanol and ethanol. The polymers possessed increased electroconductivity. Spontaneous polymerization in 4-bromopyridine monomers on storage was observed, the polymer being of crystalline structure. Thanks are given to Ye. I. Palabarov for determination of electrical properties of the polymers. Orig. art. has: 1 formula, 2 tables, and 2 charts.

ASSOCIATION: Institut khimicheskoy fiziki, AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 27Jul62

DATE ACQ: 10Feb64

ENCL: 01

SUB CODE: CH

NO REF SOV: 005

OTHER: 005

Card 2/82

L 12423-65 EWT(m)/EPA(s)-2/EPF(c)/T/EWP(j) Pc-4/Pr-4/Pt-10 ASD(a)-5/AFWL/
ESD(dp)/ESD(t) RM

ACCESSION NR: AP4047213

S/0190/64/006/010/1838/1843

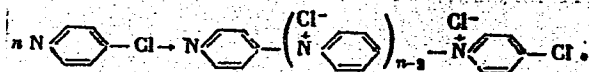
AUTHOR: Berlin, A. A.; Razvodovskiy, Ye. F.; Korolev, G. V.

TITLE: Certain problems of 4-chloropyridine polymerization 1

SOURCE: Vyssokomolekulyarnyya soedineniya, v. 6, no. 10, 1964, 1838-1843

TOPIC TAGS: organic semiconductor, semiconducting polymer, polymerization, polychloropyridine, polymerization kinetics, polymerization mechanism

ABSTRACT: A study has been made of the kinetics and mechanism of 4-chloropyridine polymerization to a conjugated polymer:



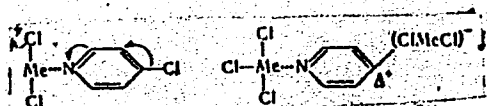
Because this reaction proceeds readily, it was considered a suitable model for studying the formation mechanism of conjugated polymers. The initiating effect of certain salts ($\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$, $\text{FeCl}_2 \cdot 4\text{H}_2\text{O}$,

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ACCESSION NR: AP4047213

$\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$, $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$, $\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$, BaCl_2 , $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$, and $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ and 1,4-dibromobutane, and the inhibiting effect of amines (pyridine and 4,4'-bipyridyl) and water were studied. The Al, Fe, and Sn salts catalyzed the reaction, and the following two-step initiation mechanism was proposed:



Ternary amines and water inhibited the reaction, which suggests that propagation occurs via the chlorine atom. The temperature dependence of the polymerization was studied, and a termination mechanism was proposed. On the basis of the kinetic data, it was suggested that the polymer has an autocatalytic effect on the reaction, and a catalytic mechanism involving the so-called local activation effect was suggested. Orig. art. has: 5 figures, 2 tables, and 3 formulas.

Card 2/3

L 12423-65

ACCESSION NR: AP4047213

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of
Chemical Physics, AN SSSR)

SUBMITTED: 13Dec63

ATD PRESS: 3121 ENCL: 00

SUB CODE: GC, SS

NO REF SOV: 006 OTHER: 004

Card 3/3

BERLIN, A.A.; RAZVODOVSKIY, Ye.F.

Synthesis of polymers with charged heteroatoms in macromolecular chains. "Onium" polymerization. Dokl. AN SSSR 140 no.3:598-600 S '61. (MIRA 14:9)

1. Predstavleno akademikom V.N.Kondrat'yevym.
(Onium compounds) (Polymers)

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S/020/61/140/003/014/020
B103/B101

15.815D

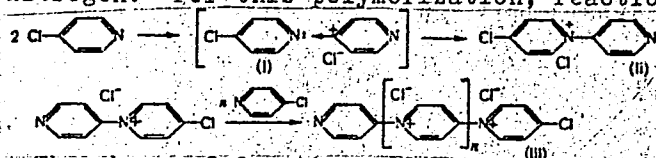
AUTHORS: Berlin, A. A., and Razvodovski, Ye. F.
TITLE: Synthesis of polymers with charged heteroatoms in macro-
molecule chains. Onium polymerization
PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 3, 1961,
598 - 600

TEXT: The authors investigated the possibility of obtaining "onium polymers" from 4-chloro pyridine (XII) containing a nucleophilic nitrogen atom and a mobile halogen. Pure XII was heated at 50 - 60°C, or stored at 20°C; thus, a yellowish brown polymer was produced, and neither atoms nor groups were split off from the monomer. Unlike XII-monomer, the polymer contains 90 % of titratable chloride ions. The degree of polymerization amounts to 8 - 14 ($M_n = 912 - 1600$). The infrared spectra of the synthesized products showed an intensified absorption in the range of 802 cm^{-1} , as compared with pyridyl pyridine chloride. The authors assume this to be a para-substitution. Furthermore, the maxima missing in XII appeared between 1360 and 1310 cm^{-1} . They correspond to the bonds $\text{-C-N}\langle$. The frequencies
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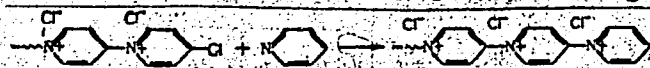
Synthesis of polymers with...

corresponding to the -C-Cl bond were greatly reduced. Therefore, the resulting polymers contain chloro pyridine links, and terminal atoms of chlorine and nitrogen. For this polymerization, reaction no. 1



is suggested. The share of fractions of higher-molecular products formed by block polymerization of reactive macromolecules of type III is hardly large under test conditions. By adding 0.5 - 2% chloranil, or polymer of XII, the process is greatly accelerated. This supports the view that a migration of the mobile Cl atoms occurs during polymerization. The chain in this polymerization may tear off by inactivation of Cl⁻, either by hydrolysis of the salt of polymeric pyridine, or by interaction of the final halogen with organic or inorganic bases. As a matter of fact, lower-molecular products are formed during polymerization of XII in the presence of pyridine, without a final halogen, according to reaction no. 2

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Synthesis of polymers with...

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B103/B101

The principle of onium polymerization can also be used to produce various copolymers, e. g., π -dipyridyl with chloranil in toluene solution, or in fusion at 130°C. The dark-brown product is soluble in methanol, pyridine, and water. If it is dissolved in concentrated H_2SO_4 , HCl is set free. The epr signal of the polymer is symmetric and corresponds to $5 \cdot 10^{18}$ paramagnetic particles per g. The q-factor is 2.00, the width of the signal is 8 oersteds. The onium compounds have elevated electrical conductivity, which rapidly increases with rising temperature. The authors thank Ye. I. Balabanov for determining the electric properties. There are 2 tables and 6 references: 3 Soviet and 3 non-Soviet.

PRESENTED: May 6, 1961, by V. N. Kondrat'yev, Academician

SUBMITTED: April 12, 1961

Card 4/4

L 39436-65 EPF(c)/EWP(j)/EWA(c)/EWI(m)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5005889

S/0020/65/160/003/0604/0607

AUTHORS: Kargin, V. A. (Academician AN SSSR); Kabanov, V. A.; Aliyev, K. V.; Razvodovski, Ye. F.

TITLE: Specific polymerization of 4-vinylpyridine salts

SOURCE: AN SSSR. Doklady, v. 160, no. 3, 1965, 604-607

TOPIC TAGS: pyridine, vinyl, polymerization

ABSTRACT: When 4-vinylpyridine reacts with alkyl halides, instead of monomers of quaternary salts, colorless hygroscopic high-molecular amorphous substances form, soluble in water and in methyl alcohol. These substances do not contain vinyl groups or tertiary pyridine rings, but are typical polyelectrolytes. The complete elemental composition of the high-molecular products from reaction between 4-vinylpyridine and ethyl bromide in various solvents (benzene, acetonitrile, methyl alcohol) at different molar ratios of the components (1:3 to 3:1) corresponds to poly-4-vinylpyridine ethyl bromide (within the limits of analytical error). In excess 4-vinylpyridine, the polymer ceases to form simultaneously with consumption of alkyl halide. Ordinary polymeric inhibitors do not retard this reaction or

Card 1/2

L 39436-65

ACCESSION NR: AP5005889

lower the specific gravity. Radical polymerization is thus excluded. The cation mechanism of polymerization is also excluded. All experimental facts point to a specific mechanism that permits the growing chains, by virtue of special behavior of their active centers, to "select" only those monomeric molecules in the reaction system that form salts. This special behavior has to do with polarization of the double bond. The authors describe several experiments in which the reaction is fast, or slow, or absent entirely, and they offer explanations for the results based on the concept of specific features of the active centers. Orig. art. has: 4 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva Akademii nauk SSSR (Institute of Petroleum-Chemical Synthesis, Academy of Sciences SSSR)

SUBMITTED: 12Aug64

ENCL: 00

SUB CODE: CC, CC

NO REF SOV: 000

OTHER: 001

Card 2/210

KABOVIN, V.A., akademik; KABANOV, V.A.; ALIYEV, K.V.; RAZVOZOVSKIY, Ya.F.

Specific polymerization of 4-vinylpyridine salts. Dokl. AN SSSR
160 no.3:664-667 Ja '65. (MIRA 18:3)

1. Institut nef'tekhimicheskogo sinteza im. A.V. Topchiyeva AN
SSSR.

ALEKSEYEV, A.; RESHETNYAK, I.; SHPAGIN, V.; SUROVETSKIY, Ye.; DAVYDOV, I.,
(Baku); KRASNOV, A. (Al'met'yevsk); SAVEL'YEV, G.;
~~RAZVOROTHEV, A.~~; KOZLOV, A., inzh.; TURUTIN, I.; VALIOTTI, B.
(Arkhangel'sk); VEL'MITSKIY, V.

Letters to the editor. Sov.profsoiuzy 16 no.6:47-52

Mr '60.

(MIRA 13:3)

1. Starshiy instruktor Chuvashskogo oblsovprofa (for Alekseyev).
 2. Chlen kraykoma profsoyuza rabotnikov svyazi, rabochikh avtomobil'nogo transporta i shosseynykh dorog, g.Maykop (for Reshetnyak).
 3. Predsedatel' ob'yedinennogo postroykoma Bratskgesstroya (for Shpagin).
 4. Starshiy instruktor Yakutskogo oblastnogo soveta profsoyuzov (for Surovetskiy).
 5. Predsedatel' komissii obshchestvennogo kontrolya za rabotoy torga, Arkhangel'sk (for Savel'yev).
 6. Sekretar' partbyuro tresta "Ukhtastroy," g.Ukhta, Komi ASSR (for Razvorotnov).
 7. Redaktor mnogotirazhnoy gazety "Zhilstroyevets" (for Turutin).
- (Labor and laboring classes) (Trade unions)

19
RAZVYAZKINA, G.M.

Insects as carriers of phytopathogenic viruses. Zool. zhur. 41
no.4:481-490 Ap '62. (MIRA 15:4)

1. All-Union Research Institute of Phytopathology, Moscow.
(Insects as carriers of plant diseases)
(Virus diseases of plants)

VILKOVA, N.A., aspirantka; KOZLENKO, V.N., fitopatolog (Brazhnoye, Krasnoyarskogo kraya); GULYARENKO, F.N.; RAZVYAZKINA, G.M.; KAPKOVA, Ye.A.; BELYANCHIKOVA, Yu.V.; DZHUMABAYEV, P., aspirant; RASSADINA, Ye.G., aspirant; NIKITINA, M.D., mladshiy nauchnyy sotrudnik; LOGINOVA, K.M., kand.sel'skokhoz.nauk; YUZ'KO, S.L.; PETROVA, N.A.

Brief information. Zashch. rast. ot vred. i bol. 8 no.9:53-57
S '63. (MIRA 16:10)

1. Vsesoyuznyy institut zashchity rasteniy (for Vilkova, Rassadina).
2. Zaveduyushchiy Lisetskim sortouchastkom, selo Krekhovtsy, Ivanovo-Frankovskoy oblasti (for Gulyarenko).
3. Laboratoriya mikologii Vsesoyuznogo instituta zashchity rasteniy (for Dzhumabayev).
4. Chitinskaya sel'skokhozyaystvennaya opytnaya stantsiya (for Nikitina).
5. Pushkinskaya baza Vsesoyuznogo instituta zashchity rasteniy (for Loginova).
6. Ul'yanovskaya sel'skokhozyaystvennaya opytnaya stantsiya, pochtovoye otdeleniye Isheyevka (for Petrova).

B. A.

ATL - 28

*Distribution of the "stolbur" virus in nature. C. M. Karyukhin (Mikrobiologiya, 1960, 28, 286-288).—The virus of stolbur is carried and transmitted by the cicada *Hyalesthes obsoletus*. The incubation period is about 2-7 days. Transmission to tomato plants occurred by 5 min. feeding on the plant. Inoculation of the plant leaves and stems causes infection but not inoculation of the roots. The natural reservoir for the virus is in bindweed, and eradication of this is the best preventive measure against the disease. D. H. SARRIS.*

All-Union Inst for Protection of Plants, Moscow Station

RUSSIA, U.S.S.R.

Tobacco - diseases and pests

Spread of the virus of chlorosis in makherka by tobacco thrips. Tabak 13, no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

RAZYAZKINA, G.M.

Tobacco thrips

Tobacco thrips as carrier of the tip chlorosis in tobacco. Zool. zhur. 31. No. 1, 1952

Monthly List of Russian Accessions, Library of Congress, March, 1952 UNCLASSIFIED